## CLAIMS

 Use of an effective amount of at least one heterocyclic compound of formula (I) or of one of its salts,

Hy 
$$=$$
  $R_3$   $R_2$   $R_3$ 

5

in which:

- Hy represents a heterocycle with 4, 5, 6 or 7 atoms optionally comprising at least one carbonyl functional group and/or one thiocarbonyl functional group, the 10 said heterocycle optionally being substituted by at least one substituent chosen from a halogen, OR, SR, NRR', COR, CSR, NRCONR'R", C(=NR)R', C(=NR)NR'R", NRC(=NR')NR"R", OCOR, COSR, SCOR, CSNRR', NRCSR', NRCSNR'R", COOR, CONRR', CF3, CN, NRCOR', SO2R', SO2NRR' 15 or NRSO<sub>2</sub>R' groups, saturated or unsaturated and linear or branched  $C_1 - C_{20}$  alkyl radicals or saturated or unsaturated rings of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for these rings to be separate or fused, it being possible for 20 the alkyl radicals and the rings, in addition, to be substituted, where R, R', R" and R", which are identical or different, denote a hydrogen, a linear or branched C1-C20 alkyl radical or an aryl radical which is optionally substituted;

25 - G represents O, S or NH;

-  $R_1$ ,  $R_2$  and  $R_3$  represent, independently of one another, a hydrogen, a halogen, an  $OR_0$ ,  $SR_0$ ,  $NR_0R_0$ ,  $COR_0$ ,  $CSR_0$ ,  $NR_0CONR_0$ ,  $R_0$ ,  $C(=NR_0)R_0$ ,  $C(=NR_0)NR_0$ ,  $R_0$ ,

 $NR_0C(=NR_0')NR_0''R_0'''$ ,  $OCOR_0$ ,  $COSR_0$ ,  $SCOR_0$ ,  $CSNR_0R_0'$ ,

- $5~NR_0CSR_0'$ ,  $NR_0CSNR_0'R_0''$ ,  $COOR_0$ ,  $CONR_0R_0'$ ,  $CF_3$ ,  $NO_2$ , CN,  $NR_0COR_0'$ ,  $SO_2R_0'$ ,  $SO_2NR_0R_0'$  or  $NR_0SO_2R_0'$  group, a saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl radical or at least one saturated or unsaturated ring of 4 to 7 atoms optionally comprising at least one
- 10 heteroatom, it being possible for the rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be substituted, where  $R_0$ ,  $R_0$ ,  $R_0$ , and  $R_0$ , which are identical or different, denote a hydrogen, a linear or branched
- 15  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which is optionally substituted;

as agent for inducing and/or stimulating the growth of keratinous fibres, in particular human keratinous fibres, and/or slowing down their loss and/or

20 increasing their density.

 Cosmetic use of at least one heterocyclic compound of formula (I) or of one of its salts,

- Hy represents a heterocycle with 4, 5, 6 or 7 atoms optionally comprising at least one carbonyl functional group and/or one thiocarbonyl functional group, the said heterocycle optionally being substituted by at
- least one substituent chosen from a halogen, OR, SR, NRR', COR, CSR, NRCONR'R", C(=NR)R', C(=NR)NR'R", NRC(=NR')NR"R", OCOR, COSR, SCOR, CSNRR', NRCSR', NRCSNR'R", COOR, CONRR', CF<sub>3</sub>, CN, NRCOR', SO<sub>2</sub>R', SO<sub>2</sub>NRR' or NRSO<sub>2</sub>R' groups, saturated or unsaturated and linear
- or branched  $C_1$ - $C_{20}$  alkyl radicals or saturated or unsaturated rings of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for these rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be
- substituted, where R, R', R" and R", which are identical or different, denote a hydrogen, a linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl radical or an aryl radical which is optionally substituted;
  - G represents O, S or NH;
- 20  $R_1$ ,  $R_2$  and  $R_3$  represent, independently of one another, a hydrogen, a halogen, an  $OR_0$ ,  $SR_0$ ,  $NR_0R_0$ ,  $COR_0$ ,  $CSR_0$ ,  $NR_0CONR_0$ ,  $R_0$ ,  $C(=NR_0)R_0$ ,  $C(=NR_0)NR_0$ ,  $C(=NR_0)NR_0$
- 25  $NR_0COR_0$ ',  $SO_2R_0$ ',  $SO_2NR_0R_0$ ' or  $NR_0SO_2R_0$ ' group, a saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl radical or at least one saturated or unsaturated ring

of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for the rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be substituted, where R<sub>0</sub>, R<sub>0</sub>', R<sub>0</sub>" and R<sub>0</sub>", which are identical or different, denote a hydrogen, a linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl radical or an aryl radical which is optionally substituted;

in a cosmetic composition for caring for and/or making

10 up human keratinous fibres in order to induce and/or

stimulate their growth, to slow down their loss and/or

to increase their density and/or to treat androgenic

alopecia.

3. Use of at least one heterocyclic compound of formula (I) or of one of its salts,

in which:

- Hy represents a heterocycle with 4, 5, 6 or 7 atoms optionally comprising at least one carbonyl functional group and/or one thiocarbonyl functional group, the said heterocycle optionally being substituted by at least one substituent chosen from a halogen, OR, SR, NRR', COR, CSR, NRCONR'R", C(=NR)R', C(=NR)NR'R", NRC(=NR')NR"R", OCOR, COSR, SCOR, CSNRR', NRCSR', NRCSR', NRCSNR'R", COOR, CONRR', CF3, CN, NRCOR', SO2R', SO2NRR'

- or  $NRSO_2R'$  groups, saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl radicals or saturated or unsaturated rings of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for these
- rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be substituted, where R, R', R" and R", which are identical or different, denote a hydrogen, a linear or branched  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which
- 10 is optionally substituted;
  - G represents O, S or NH;
  - $R_1$ ,  $R_2$  and  $R_3$  represent, independently of one another, a hydrogen, a halogen, an  $OR_0$ ,  $SR_0$ ,  $NR_0R_0$ ,  $COR_0$ ,  $CSR_0$ ,  $NR_0CONR_0$ ,  $R_0$ ,  $C(=NR_0)R_0$ ,  $C(=NR_0)NR_0$ ,  $R_0$ ,
- $15 \quad NR_0C \, (=NR_0{}') \, NR_0{}''R_0{}''', \, \, OCOR_0 \, , \, \, COSR_0 \, , \, \, SCOR_0 \, , \, \, CSNR_0R_0{}' \, , \\ NR_0CSR_0{}' \, , \, \, NR_0CSNR_0{}'R_0{}'' \, , \, \, COOR_0 \, , \, \, CONR_0R_0{}' \, , \, \, CF_3 \, , \, \, NO_2 \, , \, \, CN \, , \\ NR_0COR_0{}' \, , \, \, SO_2R_0{}' \, , \, \, SO_2NR_0R_0{}' \, \, \, \text{or} \, \, NR_0SO_2R_0{}' \, \, \text{group, a saturated} \\ \text{or unsaturated and linear or branched $C_1-C_{20}$ alkyl } \\ \text{radical or at least one saturated or unsaturated ring}$
- of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for the rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be substituted, where  $R_0$ ,  $R_0$ ,  $R_0$ , and  $R_0$ , which are identical or
- 25 different, denote a hydrogen, a linear or branched  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which is optionally substituted;

in the preparation of a composition for caring for or treating human keratinous fibres intended to induce and/or stimulate the growth of the fibres and/or to slow down their loss and/or to increase their density and/or to treat androgenic alopecia.

 Use of at least one heterocyclic compound of formula (I) or of one of its salts,

Hy 
$$=$$
  $R2$   $R3$   $R3$ 

- Hy represents a heterocycle with 4, 5, 6 or 7 atoms optionally comprising at least one carbonyl functional group and/or one thiocarbonyl functional group, the said heterocycle optionally being substituted by at least one substituent chosen from a halogen, OR, SR, NRR', COR, CSR, NRCONR'R", C(=NR)R', C(=NR)NR'R", NRC(=NR')NR"R", OCOR, COSR, SCOR, CSNRR', NRCSR', NRCSNR'R", COOR, CONRR', CF3, CN, NRCOR', SO2R', SO2NRR'
- or  $NRSO_2R'$  groups, saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl radicals or saturated or 20 unsaturated rings of 4 to 7 atoms optionally comprising
  - at least one heteroatom, it being possible for these rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be substituted, where R, R', R" and R", which are
- 25 identical or different, denote a hydrogen, a linear or

branched  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which is optionally substituted;

- G represents O, S or NH;
- $R_1$ ,  $R_2$  and  $R_3$  represent, independently of one another,
- 5 a hydrogen, a halogen, an  $OR_0$ ,  $SR_0$ ,  $NR_0R_0$ ',  $COR_0$ ,  $CSR_0$ ,  $NR_0CONR_0'R_0''$ ,  $C(=NR_0)R_0'$ ,  $C(=NR_0)NR_0'R_0''$ ,

 $NR_0C \, (=NR_0\,{}'\,) \, NR_0\,{}''R_0\,{}''', \; OCOR_0\,, \; COSR_0\,, \; SCOR_0\,, \; CSNR_0R_0\,{}'\,,$ 

NR<sub>0</sub>CSR<sub>0</sub>', NR<sub>0</sub>CSNR<sub>0</sub>'R<sub>0</sub>", COOR<sub>0</sub>, CONR<sub>0</sub>R<sub>0</sub>', CF<sub>3</sub>, NO<sub>2</sub>, CN,

 $NR_0COR_0{}^\prime{}$  ,  $SO_2R_0{}^\prime{}$  ,  $SO_2NR_0R_0{}^\prime{}$  or  $NR_0SO_2R_0{}^\prime{}$  group, a saturated

- or unsaturated and linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl radical or at least one saturated or unsaturated ring of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for the rings to be separate or fused, it being possible for the alkyl
- 15 radicals and the rings, in addition, to be substituted, where  $R_0$ ,  $R_0$ ,  $R_0$ ,  $R_0$ , and  $R_0$ , which are identical or different, denote a hydrogen, a linear or branched  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which is optionally substituted;
- 20 as inhibitor of 15-hydroxyprostaglandin dehydrogenase, in particular human 15-hydroxyprostaglandin dehydrogenase.
  - Use of at least one heterocyclic compound of formula (I) or of one of its salts,

$$R1$$

$$R2$$

$$R3$$

$$R3$$

- Hy represents a heterocycle with 4, 5, 6 or 7 atoms optionally comprising at least one carbonyl functional group and/or one thiocarbonyl functional group, the said heterocycle optionally being substituted by at least one substituent chosen from a halogen, OR, SR, NRR', COR, CSR, NRCONR'R", C(=NR)R', C(=NR)NR'R", NRC(=NR')NR"R", OCOR, COSR, SCOR, CSNRR', NRCSR', NRCSNR'R", COOR, CONRR', CF3, CN, NRCOR', SO2R', SO2NRR'
- or  $NRSO_2R'$  groups, saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl radicals or saturated or unsaturated rings of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for these rings to be separate or fused, it being possible for
- 15 the alkyl radicals and the rings, in addition, to be substituted, where R, R', R" and R", which are identical or different, denote a hydrogen, a linear or branched  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which is optionally substituted;
- 20 G represents O, S or NH;
  - $R_1$ ,  $R_2$  and  $R_3$  represent, independently of one another, a hydrogen, a halogen, an  $OR_0$ ,  $SR_0$ ,  $NR_0R_0$ ,  $COR_0$ ,  $CSR_0$ ,  $NR_0CONR_0$ ,  $R_0$ ,  $C(=NR_0)R_0$ ,  $C(=NR_0)NR_0$ ,  $R_0$ ,
  - $NR_0C(=NR_0')NR_0"R_0"'$ ,  $OCOR_0$ ,  $COSR_0$ ,  $SCOR_0$ ,  $CSNR_0R_0'$ ,
- 25  $NR_0CSR_0$ ',  $NR_0CSNR_0$ ' $R_0$ ",  $COOR_0$ ,  $CONR_0R_0$ ',  $CF_3$ ,  $NO_2$ , CN,  $NR_0COR_0$ ',  $SO_2R_0$ ',  $SO_2NR_0R_0$ ' or  $NR_0SO_2R_0$ ' group, a saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl

radical or at least one saturated or unsaturated ring of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for the rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be substituted, where R<sub>0</sub>, R<sub>0</sub>', R<sub>0</sub>" and R<sub>0</sub>", which are identical or different, denote a hydrogen, a linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl radical or an aryl radical which is optionally substituted;

- in the manufacture of a composition for caring for or treating human keratinous fibres intended to treat disorders related to 15-hydroxyprostaglandin dehydrogenase in man.
- 6. Use according to one of the preceding 15 claims, characterized in that the keratinous fibres are the hair, eyebrows, eyelashes, beard hairs, moustache hairs and pubic hairs.
- Use of an effective amount of at least one heterocyclic compound of formula (I) or of one of
   its salts,

$$Hy = \begin{pmatrix} R1 \\ G \\ R3 \end{pmatrix} \qquad (I)$$

in which:

Hy represents a heterocycle with 4, 5, 6 or 7 atoms optionally comprising at least one carbonyl functional
 group and/or one thiocarbonyl functional group, the

said heterocycle optionally being substituted by at least one substituent chosen from a halogen, OR, SR, NRR', COR, CSR, NRCONR'R", C(=NR)R', C(=NR)NR'R", NRC(=NR')NR"R", OCOR, COSR, SCOR, CSNRR', NRCSR',

- 5 NRCSNR'R", COOR, CONRR', CF<sub>3</sub>, CN, NRCOR', SO<sub>2</sub>R', SO<sub>2</sub>NRR' or NRSO<sub>2</sub>R' groups, saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl radicals or saturated or unsaturated rings of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for these
- 10 rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be substituted, where R, R', R" and R"', which are identical or different, denote a hydrogen, a linear or branched  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which
- 15 is optionally substituted;
  - G represents O, S or NH;
  - $R_1$ ,  $R_2$  and  $R_3$  represent, independently of one another, a hydrogen, a halogen, an  $OR_0$ ,  $SR_0$ ,  $NR_0R_0$ ,  $COR_0$ ,  $CSR_0$ ,  $NR_0CONR_0$ ,  $R_0$ ,  $C(=NR_0)R_0$ ,  $C(=NR_0)NR_0$ ,  $R_0$ ,
- of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for the rings to be separate or fused, it being possible for the alkyl

radicals and the rings, in addition, to be substituted, where  $R_0$ ,  $R_0$ ',  $R_0$ " and  $R_0$ ", which are identical or different, denote a hydrogen, a linear or branched  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which is optionally substituted;

in a cosmetic composition for human hair care in order to reduce hair loss and/or to increase hair density and/or to treat androchronogenetic alopecia and/or to treat alopecia of natural origin.

10 8. Use of at least one heterocyclic compound of formula (I) or of one of its salts,

Hy 
$$=$$
  $R_3$   $R_3$   $R_3$ 

in which:

- Hy represents a heterocycle with 4, 5, 6 or 7 atoms

15 optionally comprising at least one carbonyl functional group and/or one thiocarbonyl functional group, the said heterocycle optionally being substituted by at least one substituent chosen from a halogen, OR, SR, NRR', COR, CSR, NRCONR'R", C(=NR)R', C(=NR)NR'R",

20 NRC(=NR')NR"R", OCOR, COSR, SCOR, CSNRR', NRCSR', NRCSNR'R", COOR, CONRR', CF<sub>3</sub>, CN, NRCOR', SO<sub>2</sub>R', SO<sub>2</sub>NRR' or NRSO<sub>2</sub>R' groups, saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl radicals or saturated or unsaturated rings of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for these

rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be substituted, where R, R', R" and R", which are identical or different, denote a hydrogen, a linear or branched  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which is optionally substituted;

- G represents O, S or NH;
- $R_1$ ,  $R_2$  and  $R_3$  represent, independently of one another, a hydrogen, a halogen, an  $OR_0$ ,  $SR_0$ ,  $NR_0R_0$ ,  $COR_0$ ,  $CSR_0$ ,
- $$\begin{split} 10 & NR_0CONR_0'R_0'', \ C(=NR_0)R_0', \ C(=NR_0)NR_0'R_0'', \\ & NR_0C(=NR_0')NR_0''R_0''', \ OCOR_0, \ COSR_0, \ SCOR_0, \ CSNR_0R_0', \\ & NR_0CSR_0', \ NR_0CSNR_0'R_0'', \ COOR_0, \ CONR_0R_0', \ CF_3, \ NO_2, \ CN, \\ & NR_0COR_0', \ SO_2R_0', \ SO_2NR_0R_0' \ or \ NR_0SO_2R_0' \ group, \ a \ saturated \\ & or \ unsaturated \ and \ linear \ or \ branched \ C_1-C_{20} \ alkyl \\ \end{split}$$
- of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for the rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be substituted,
- where  $R_0$ ,  $R_0$ ,  $R_0$ ,  $R_0$  and  $R_0$ , which are identical or different, denote a hydrogen, a linear or branched  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which is optionally substituted;

in the preparation of a human hair composition intended to induce and/or stimulate the growth of the hair and/or to slow down hair loss and/or to increase hair

density and/or to treat androgenic alopecia and/or to treat alopecia of natural origin.

 Use of at least one heterocyclic compound of formula (I) or of one of its salts,

$$Hy = G$$

$$R1$$

$$R3$$

$$(I)$$

5

in which:

- Hy represents a heterocycle with 4, 5, 6 or 7 atoms optionally comprising at least one carbonyl functional group and/or one thiocarbonyl functional group, the 10 said heterocycle optionally being substituted by at least one substituent chosen from a halogen, OR, SR, NRR', COR, CSR, NRCONR'R", C(=NR)R', C(=NR)NR'R", NRC(=NR')NR"R", OCOR, COSR, SCOR, CSNRR', NRCSR', NRCSNR'R", COOR, CONRR', CF3, CN, NRCOR', SO2R', SO2NRR' 15 or NRSO<sub>2</sub>R' groups, saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl radicals or saturated or unsaturated rings of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for these rings to be separate or fused, it being possible for 20 the alkyl radicals and the rings, in addition, to be substituted, where R, R', R" and R"", which are identical or different, denote a hydrogen, a linear or branched  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which is optionally substituted;

25 - G represents O, S or NH;

-  $R_1$ ,  $R_2$  and  $R_3$  represent, independently of one another, a hydrogen, a halogen, an  $OR_0$ ,  $SR_0$ ,  $NR_0R_0$ ,  $COR_0$ ,  $CSR_0$ ,  $NR_0CONR_0$ ,  $C(=NR_0)R_0$ ,  $C(=NR_0)NR_0$ ,  $C(=NR_0)NR_0$ ,

 $NR_0C(=NR_0')NR_0"R_0"'$ ,  $OCOR_0$ ,  $COSR_0$ ,  $SCOR_0$ ,  $CSNR_0R_0'$ ,

- $NR_0CSR_0'$ ,  $NR_0CSNR_0'R_0''$ ,  $COOR_0$ ,  $CONR_0R_0'$ ,  $CF_3$ ,  $NO_2$ , CN,  $NR_0COR_0'$ ,  $SO_2R_0'$ ,  $SO_2NR_0R_0'$  or  $NR_0SO_2R_0'$  group, a saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl radical or at least one saturated or unsaturated ring of 4 to 7 atoms optionally comprising at least one
- 10 heteroatom, it being possible for the rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be substituted, where  $R_0$ ,  $R_0$ ,  $R_0$ , and  $R_0$ , which are identical or different, denote a hydrogen, a linear or branched
- 15  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which is optionally substituted;

in a cosmetic composition for caring for and/or for making up human eyelashes for inducing and/or stimulating the growth of the eyelashes and/or

20 increasing their density.

10. Use of at least one heterocyclic compound of formula (I) or of one of its salts,

$$Hy = \begin{pmatrix} R1 \\ G \\ R3 \end{pmatrix} \qquad (I)$$

- Hy represents a heterocycle with 4, 5, 6 or 7 atoms optionally comprising at least one carbonyl functional group and/or one thiocarbonyl functional group, the said heterocycle optionally being substituted by at
- least one substituent chosen from a halogen, OR, SR, NRR', COR, CSR, NRCONR'R", C(=NR)R', C(=NR)NR'R", NRC(=NR')NR"R", OCOR, COSR, SCOR, CSNRR', NRCSR', NRCSNR'R", COOR, CONRR', CF3, CN, NRCOR', SO2R', SO2NRR' or NRSO2R' groups, saturated or unsaturated and linear
- or branched  $C_1$ - $C_{20}$  alkyl radicals or saturated or unsaturated rings of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for these rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be
- substituted, where R, R', R" and R", which are identical or different, denote a hydrogen, a linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl radical or an aryl radical which is optionally substituted;
  - G represents O, S or NH;
- 20  $R_1$ ,  $R_2$  and  $R_3$  represent, independently of one another, a hydrogen, a halogen, an  $OR_0$ ,  $SR_0$ ,  $NR_0R_0$ ,  $COR_0$ ,  $CSR_0$ ,  $NR_0CONR_0$ ,  $R_0$ ,  $C(=NR_0)R_0$ ,  $C(=NR_0)NR_0$ ,  $R_0$ ,  $R_0$
- 25  $NR_0COR_0$ ',  $SO_2R_0$ ',  $SO_2NR_0R_0$ ' or  $NR_0SO_2R_0$ ' group, a saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl radical or at least one saturated or unsaturated ring

of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for the rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be substituted,

5 where  $R_0$ ,  $R_0$ ',  $R_0$ " and  $R_0$ ", which are identical or different, denote a hydrogen, a linear or branched  $C_1$ - $C_{20}$  alkyl radical or an aryl radical which is optionally substituted;

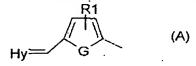
in the preparation of a composition for caring for

10 and/or treating human eyelashes intended to induce

and/or stimulate the growth of the eyelashes and/or to

increase their density.

- 11. Use according to one of the preceding claims, characterized in that the heteroatom or 15 heteroatoms of Hy are chosen from O, N or S.
  - 12. Use according to one of the preceding claims, characterized in that  $R_2$  and  $R_3$  are in the paraor meta-position with regard to the following part A:



- 20 13. Use according to one of the preceding claims, characterized in that  $R_1$  represents a hydrogen atom.
- 14. Use according to one of the preceding claims, characterized in that at least one of the  $R_2$  and  $R_3$  groups represents  $CF_3$ ,  $OR_0$  or  $COOR_0$  with  $R_0$  being H or

a saturated or unsaturated, linear or branched,  $C_1-C_{20}$ , better still  $C_1-C_{10}$ , alkyl radical.

15. Use according to the preceding claim, characterized in that  ${\rm COOR}_0$  represents COOH or  ${\rm COOCH}_2$ -  ${\rm CH}_3$ .

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- 16. Use according to one of the preceding claims, characterized in that  $R_2$  represents COOH and  $R_3$  represents H;  $R_2$  represents COOCH<sub>2</sub>-CH<sub>3</sub> and  $R_3$  represents H; or  $R_2$  and  $R_3$  represent CF<sub>3</sub> or OCH<sub>3</sub>.
- 17. Use according to one of the preceding claims, characterized in that the compound of formula

  (I) comprises one or two carbonyl groups, the carbon of which groups forms part of the heterocycle.
- 18. Use according to one of the preceding

  15 claims, characterized in that the heterocyclic compound exhibits the following formula (IIIa) or the corresponding salt form:

in which Z, Z' and G independently represent O or S; 20 and at least one of the  $R_2$  and  $R_3$  groups represents  $CF_3$ ,  $OR_0$  or  $COOR_0$  with  $R_0$  being H or a saturated or unsaturated, linear or branched,  $C_1-C_{20}$ , better still  $C_1-C_{10}$ , alkyl radical.

- 19. Use according to one of the preceding claims, characterized in that the compound of formula (I) comprises a thiazolidinedione ring.
- 20. Use according to Claim 18, characterized in that, when Z = Z' = G, at least one of the R<sub>2</sub> and R<sub>3</sub> groups represents CF<sub>3</sub> or COOR<sub>0</sub> with R<sub>0</sub> being a saturated, linear or branched, C<sub>1</sub>-C<sub>10</sub>, better still C<sub>1</sub>-C<sub>5</sub>, alkyl radical; or, when Z = Z' and are different from G, at least one of the R<sub>2</sub> and R<sub>3</sub> groups represents CF<sub>3</sub> or COOR<sub>0</sub> with R<sub>0</sub> being H.
- claims, characterized in that the salt of the compound of formula (I) is a salt chosen from sodium salts, potassium salts, salts of zinc (Zn<sup>2+</sup>), of calcium (Ca<sup>2+</sup>), of copper (Cu<sup>2+</sup>), of iron (Fe<sup>2+</sup>), of strontium (Sr<sup>2+</sup>), of magnesium (Mg<sup>2+</sup>), of manganese (Mn<sup>2+</sup>) or of ammonium, triethanolamine, monoethanolamine, diethanolamine, hexadecylamine, N,N,N',N'-tetrakis(2-hydroxypropyl)-ethylenediamine or tris(hydroxymethyl)aminomethane salts, or hydroxides, carbonates, halides, sulphates, phosphates or nitrates.
  - 22. Use according to one of the preceding claims, characterized in that the compound is chosen from:

- 23. Use according to one of the preceding claims, characterized in that the compound of formula (I) or a mixture of compounds of formula (I) is used at a concentration ranging from 10<sup>-3</sup> to 10%, preferably from 10<sup>-2</sup> to 2%, with respect to the total weight of the composition.
- 24. Use according to one of Claims 2 to 23, characterized in that the composition is a composition10 for topical application.
- 25. Composition for caring for or making up keratinous fibres comprising a physiologically acceptable medium and an effective amount of at least [lacuna] heterocyclic compound of formula (I) or of one of its salts,

$$Hy = \begin{pmatrix} R1 \\ G \\ R3 \end{pmatrix}$$
 (I)

- Hy represents a heterocycle with 4, 5, 6 or 7 atoms optionally comprising at least one carbonyl functional group and/or one thiocarbonyl functional group, the said heterocycle optionally being substituted by at least one substituent chosen from a halogen, OR, SR, NRR', COR, CSR, NRCONR'R", C(=NR)R', C(=NR)NR'R", NRC(=NR')NR"R", OCOR, COSR, SCOR, CSNRR', NRCSR', NRCSNR'R", COOR, CONRR', CF3, CN, NRCOR', SO2R', SO2NRR'
- or  $NRSO_2R'$  groups, saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl radicals or saturated or unsaturated rings of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for these rings to be separate or fused, it being possible for
- the alkyl radicals and the rings, in addition, to be substituted, where R, R', R" and R", which are identical or different, denote a hydrogen, a linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl radical or an aryl radical which is optionally substituted;
- 20 G represents O, S or NH;
  - $R_1$ ,  $R_2$  and  $R_3$  represent, independently of one another, a hydrogen, a halogen, an  $OR_0$ ,  $SR_0$ ,  $NR_0R_0$ ,  $COR_0$ ,  $CSR_0$ ,  $NR_0CONR_0$ ,  $R_0$ ,  $C(=NR_0)R_0$ ,  $C(=NR_0)NR_0$ ,  $R_0$ ,
- 25  $NR_0CSR_0$ ',  $NR_0CSNR_0$ ' $R_0$ ",  $COOR_0$ ,  $CONR_0R_0$ ',  $CF_3$ ,  $NO_2$ , CN,  $NR_0COR_0$ ',  $SO_2R_0$ ',  $SO_2NR_0R_0$ ' or  $NR_0SO_2R_0$ ' group, a saturated or unsaturated and linear or branched  $C_1$ - $C_{20}$  alkyl

radical or at least one saturated or unsaturated ring of 4 to 7 atoms optionally comprising at least one heteroatom, it being possible for the rings to be separate or fused, it being possible for the alkyl radicals and the rings, in addition, to be substituted, where R<sub>0</sub>, R<sub>0</sub>', R<sub>0</sub>" and R<sub>0</sub>", which are identical or different, denote a hydrogen, a linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl radical or an aryl radical which is optionally substituted.

- 26. Composition according to Claim 25, characterized in that the heteroatom or heteroatoms of Hy are chosen from O, N or S.
- 27. Composition according to Claim 25 or 26, characterized in that  $R_2$  and  $R_3$  are in the para- or 15 meta-position with regard to the following part A:

$$Hy = G$$
(A)

- \$28.\$ Composition according to one of Claims 25 to 27, characterized in that  $R_1$  represents a hydrogen atom.
- 29. Composition according to one of Claims 25 to 28, characterized in that at least one of the  $R_2$  and  $R_3$  groups represents  $CF_3$ ,  $OR_0$  or  $COOR_0$  with  $R_0$  being H or a saturated or unsaturated, linear or branched,  $C_1$ - $C_{20}$ , better still  $C_1$ - $C_{10}$ , alkyl radical.

30. Composition according to one of Claims 25 to 29, characterized in that  $COOR_0$  represents COOH or  $COOCH_2-CH_3$ .

31. Composition according to one of Claims 25 to 30, characterized in that  $R_2$  represents COOH and  $R_3$  represents H;  $R_2$  represents COOCH<sub>2</sub>-CH<sub>3</sub> and  $R_3$  represents H; or  $R_2$  and  $R_3$  represent CF<sub>3</sub> or OCH<sub>3</sub>.

32. Composition according to one of
Claims 25 to 31, characterized in that the compound of
formula (I) comprises one or two carbonyl groups, the
carbon of which groups forms part of the heterocycle.

33. Composition according to one of Claims 25 to 32, characterized in that the heterocyclic compound exhibits the following formula (IIIa) or the form of a salt:

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in which Z, Z' and G independently represent O or S; and at least one of the  $R_2$  and  $R_3$  groups represent  $CF_3$ ,  $OR_0$  or  $COOR_0$  with  $R_0$  being H or a saturated or unsaturated, linear or branched,  $C_1-C_{20}$ , better still  $C_1-C_{10}$ , alkyl radical.

34. Composition according to one of Claims 25 to 33, characterized in that the compound of formula (I) comprises a 1,3-thiazolidine-2,4-dione ring.

- 35. Composition according to Claim 34, characterized in that, when Z = Z' = G, at least one of the R<sub>2</sub> and R<sub>3</sub> groups represents CF<sub>3</sub> or COOR<sub>0</sub> with R<sub>0</sub> being a saturated, linear or branched, C<sub>1</sub>-C<sub>10</sub>, better still C<sub>1</sub>-C<sub>5</sub>, alkyl radical; or, when Z = Z' and are different from G, at least one of the R<sub>2</sub> and R<sub>3</sub> groups represents CF<sub>3</sub> or COOR<sub>0</sub> with R<sub>0</sub> being H.
- 36. Composition according to one of Claims 25 to 35, characterized in that the salt of the compound of formula (I) is a salt chosen from sodium salts, potassium salts, salts of zinc (Zn<sup>2+</sup>), of calcium (Ca<sup>2+</sup>), of copper (Cu<sup>2+</sup>), of iron (Fe<sup>2+</sup>), of strontium (Sr<sup>2+</sup>), of magnesium (Mg<sup>2+</sup>), of manganese (Mn<sup>2+</sup>) or of ammonium, triethanolamine, monoethanolamine,
- 15 diethanolamine, hexadecylamine, N,N,N',N'-tetrakis(2hydroxypropyl)ethylenediamine or tris(hydroxymethyl)aminomethane salts, or hydroxides, carbonates, halides,
  sulphates, phosphates or nitrates.
- 37. Composition according to one of

  20 Claims 25 to 36, characterized in that the compound of
  formula (I) is chosen from the following compounds:

38. Composition according to one of
Claims 25 to 37, characterized in that the compound of
formula (I) is used at a concentration ranging from 10<sup>-3</sup>
to 10%, preferably from 10<sup>-2</sup> to 2%, with respect to the
total weight of the composition.

- 39. Composition according to one of
  Claims 25 to 38, characterized in that it is provided
  in the form of a cream or lotion for hair care, of a
  shampoo or conditioner, of a hair mascara or of a

  5 mascara for the eyelashes.
  - 40. Composition according to one of Claims 25 to 39, characterized in that the composition is in the form of an aqueous, alcoholic or aqueous/alcoholic solution or suspension.
- 10 41. Composition according to one of
  Claims 25 to 40, characterized in that it comprises
  other ingredients chosen from solvents, thickeners or
  gelling agents for the aqueous phase or for the oily
  phase, colouring materials which are soluble in the
  15 medium of the composition, fillers or pigments,
  antioxidants, preservatives, fragrances, electrolytes,
  neutralizing agents, film-forming polymers, UV blocking
  agents, cosmetic and pharmaceutical active principles,
  other than the compounds of formula (I), or their
  - 42. Composition according to one of Claims 25 to 41, characterized in that it comprises at least [lacuna] additional active compound which promotes the regrowth and/or which limits the loss of keratinous fibres.
  - 43. Composition according to one of Claims 25 to 42, characterized in that it comprises at

least one additional compound which promotes hair regrowth and/or limits hair loss chosen from aminexil, 6-O-[(9Z,12Z)-octadeca-9,12-dienoyl]hexapyranose, potassium channel agonists, lipoxygenase inhibitors,

- bradykinin inhibitors, prostaglandins and their derivatives, prostaglandin receptor agonists or antagonists, nonprostanoic prostaglandin analogues, vasodilators, antiandrogens, cyclosporins and their analogues, antimicrobials, anti-inflammatories,
- 10 retinoids, benzalkonium chloride, benzethonium chloride, phenol, oestradiol, chlorpheniramine maleate, chlorophyllin derivatives, cholesterol, cysteine, methionine, menthol, peppermint oil, calcium panthotenate, panthenol, resorcinol, protein kinase C
- 15 activators, glycosidase inhibitors,
  glycosaminoglycanase inhibitors, pyroglutamic acid
  esters, hexosaccharidic acid or acylhexosaccharic acid,
  aryl-substituted ethylenes, N-acylated amino acids,
  flavonoids, ascomycin derivatives and analogues,
- 20 histamine antagonists, saponins, proteoglycanase inhibitors, oestrogen agonists and antagonists, pseudopterins, cytokines and growth factor promoters, IL-1 or IL-6 inhibitors, IL-10 promoters, TNF inhibitors, vitamins, benzophenones, hydantoin,
- 25 octopirox, retinoic acid, antipruritic agents, agents for combating parasites, antifungals, nicotinic acid esters, calcium antagonist agents, hormones,

triterpenes, anti-androgen agents, steroidal or nonsteroidal inhibitors of  $5\alpha$ -reductases, FP receptor agonists, or their mixtures.

- 44. Composition according to Claim 43, characterized in that the additional compound is chosen from aminexil, FP receptor agonists and vasodilators.
- 45. Composition according to one of
  Claims 25 to 44, characterized in that it additionally
  comprises another active principle chosen from
  10 proteins, protein hydrolysates, amino acids, polyols,
  urea, allantoin, sugars and sugar derivatives, plant
  extracts, hydroxy acids, retinol or tocopherol
  derivatives, essential fatty acids, ceramides,
  essential oils, salicylic acid or its derivatives, such
  15 as 5-(n-octanoyl)salicylic acid, esters of hydroxy
  acids, and phospholipids.
- 46. Composition for caring for or making up keratinous fibres comprising, in a physiologically acceptable medium, in particular a cosmetic medium, at least one compound of formula (I) or one of its salts and at least one additional active principle which promotes the regrowth of human keratinous fibres and/or which limits their loss chosen from aminexil, FP receptor agonists and vasodilators.
- 25 47. Composition according to one of Claims 42 to 46, characterized in that the additional

active principle is chosen from aminexil, minoxidil, latanoprost, butaprost and travoprost.

- 48. Process for the cosmetic treatment of keratinous fibres and/or of the skin from where the said fibres emerge, characterized in that it consists in applying, to the fibres and/or the skin, a cosmetic composition as defined in any one of Claims 25 to 47, in leaving this composition in contact with the fibres and/or the skin and optionally in rinsing.
- 10 49. Process for the cosmetic care of and/or for making up human eyelashes for the purpose of improving their condition and/or their appearance, characterized in that it consists in applying, to the eyelashes and/or eyelids, a mascara composition

  15 comprising at least one compound of formula (I) or one of its salts and in leaving this composition in contact with the eyelashes and/or eyelids.
- 50. Process for the cosmetic care of human hair and/or the human scalp for the purpose of improving their condition and/or their appearance, characterized in that it consists in applying, to the hair and/or the scalp, a cosmetic composition comprising an effective amount of at least one compound of formula (I) or one of its salts, in leaving this composition in contact with the hair and/or the scalp and optionally in rinsing the hair and/or the scalp.

51. Heterocyclic compound of following formula (IV) or one of its salts:

in which Z, Z' and G independently represent O or S; X

5 represents O, NH or S; R represents hydrogen or a
 saturated, linear or branched, C<sub>1</sub>-C<sub>10</sub> alkyl radical; and
 at least one of the R<sub>2</sub> and R<sub>3</sub> groups represents a
 hydrogen, CN, NO<sub>2</sub>, CF<sub>3</sub>, a phenyl, OR<sub>0</sub> or COOR<sub>0</sub> radical or
 a saturated, linear or branched, C<sub>1</sub>-C<sub>20</sub>, better still

10 C<sub>1</sub>-C<sub>10</sub>, alkyl radical optionally substituted by OR<sub>0</sub> with
 R<sub>0</sub> being H or a saturated, linear or branched, C<sub>1</sub>-C<sub>20</sub>,
 better still C<sub>1</sub>-C<sub>10</sub>, alkyl radical, provided that, when
 X = S and Z = Z' = G or Z ≠ Z', then R<sub>2</sub> and R<sub>3</sub> are other
 than COOH.

52. Heterocyclic compound of following formula (V) or one of its salts:

in which Z, Z' and G independently represent O or S; and at least one of the  $R_2$  and  $R_3$  groups represents 20 phenyl,  $NO_2$ ,  $CF_3$ ,  $OR_0$ ,  $COOR_0$  or a saturated, linear or branched,  $C_1$ - $C_{20}$ , better still  $C_1$ - $C_{10}$ , alkyl radical

optionally substituted by  $OR_0$  with  $R_0$  being H or a saturated, linear or branched,  $C_1$ - $C_{20}$ , better still  $C_1$ - $C_{10}$ , alkyl radical, provided that, when Z = Z' = G or  $Z \neq Z'$ , then  $R_2$  and  $R_3$  are other than COOH.

- 53. Compound according to Claim 51 or 52, characterized in that, when Z = Z' = G, at least one of the R<sub>2</sub> and R<sub>3</sub> groups represents CF<sub>3</sub>, OR<sub>0</sub> or COOR<sub>0</sub> with R<sub>0</sub> being a saturated, linear or branched, C<sub>1</sub>-C<sub>10</sub>, better still C<sub>1</sub>-C<sub>5</sub>, alkyl radical; or, when Z = Z' and are different from G, at least one of the R<sub>2</sub> and R<sub>3</sub> groups represents CF<sub>3</sub> or COOR<sub>0</sub> with R<sub>0</sub> being H.
- 54. Compound according to one of Claims 51 to 53, characterized in that it is the disodium salt of 4-{5-[(2,4-disulpho-1,3-thiazolidin-5-ylidene)methyl]
  2-furyl}benzoic acid.
  - 55. Compound according to Claim 51, characterized in that it exhibits the following formula (VI) or a corresponding salt form:

in which Z, Z' and G independently represent O or S; and at least one of the  $R_2$  and  $R_3$  groups represents a hydrogen, CN, CF<sub>3</sub>, NO<sub>2</sub>, OR<sub>0</sub>, COOR<sub>0</sub> or a saturated, linear or branched,  $C_1$ - $C_{20}$ , better still  $C_1$ - $C_{10}$ , alkyl radical optionally substituted by OR<sub>0</sub> with R<sub>0</sub> being H or a

saturated, linear or branched,  $C_1 - C_{20}$ , better still  $C_1 - C_{10}$ , alkyl radical.

56. Compound according to Claim 51, characterized in that it exhibits the following formula 5 (VII) or a corresponding salt form:

in which Z, Z' and G independently represent O or S; R represents a saturated, linear or branched, C<sub>1</sub>-C<sub>10</sub> alkyl radical; and at least one of the R<sub>2</sub> and R<sub>3</sub> groups

10 represents a saturated, linear or branched, C<sub>1</sub>-C<sub>20</sub>, better still C<sub>1</sub>-C<sub>10</sub>, alkyl radical, NO<sub>2</sub> or OR<sub>0</sub> with R<sub>0</sub> being H or a saturated, linear or branched, C<sub>1</sub>-C<sub>20</sub>, better still C<sub>1</sub>-C<sub>10</sub>, alkyl radical.

- 57. Compound according to one of Claims 51
  15 to 56, characterized in that it is in the Z form.
  - 58. Cosmetic use of at least one heterocyclic compound of formula (I) or of one of its salts in a cosmetic composition as agent for preserving the amount and/or the activity of prostaglandins in the hair follicle.
  - 59. Use of at least one heterocyclic compound of formula (I) or of one of its salts in the manufacture of a composition intended to preserve the

amount and/or the activity of prostaglandins in the hair follicle.